

Biochemical Genetics—Volume 16, 1978

A journal for the reporting of original research in biochemical genetics of any organism, from virus to man. Papers will deal with the molecular aspects of genetic variation and evolution, mutation, gene action and regulation, immunogenetics, somatic cell genetics, and nucleic acid function in heredity and development and with the biochemical aspects of genetic defects (provided these are not purely clinical).

Papers on new methods that apply to the above topics will be included.

Review articles will also be published occasionally.

EDITORS

Hugh S. Forrest and Robert P. Wagner, Department of Zoology, University of Texas at Austin, Austin, Texas

EUROPEAN EDITOR

Forbes Robertson, Department of Genetics, University of Aberdeen, Aberdeen, Scotland

ASSOCIATE EDITORS

Charles R. Shaw, University of Texas M. D. Anderson Hospital, Houston, Texas

Richard E. Tashian, University of Michigan, Ann Arbor, Michigan

Allan C. Wilson, University of California, Berkeley, California

H. Aebi, University of Bern, Bern, Switzerland
C. Baglioni, Massachusetts Institute of Technology, Cambridge, Massachusetts
L. Beckman, University of Umeå, Umeå, Sweden
G. J. Brewer, University of Michigan, Ann Arbor, Michigan
D. J. Cove, University of Cambridge, Cambridge, England
C. H. Doy, Australian National University, Canberra, Australia
W. F. Feenstra, University of Groningen, Groningen, The Netherlands
J. R. S. Fincham, University of Leeds, Leeds, England
W. M. Fitch, University of Wisconsin, Madison, Wisconsin
H. H. Fudenberg, University of South Carolina, Charleston, South Carolina
J. B. Harborne, University of Reading, Reading, England
L. Hood, California Institute of Technology, Pasadena, California
D. A. Hopkinson, The Galton Laboratory, London, England
J. J. Hutton, University of Kentucky, Lexington, Kentucky
T. H. Jukes, University of California, Berkeley, California
H. N. Kirkman, University of North Carolina, Chapel Hill, North Carolina
L. I. Korochkin, Institute of Cytology and Genetics, Novosibirsk, USSR
R. Lewontin, Harvard University, Cambridge, Massachusetts
E. Margoliash, Northwestern University, Evanston, Illinois
K. Paigen, Roswell Park Memorial Institute, Buffalo, New York
F. H. Ruddle, Yale University, New Haven, Connecticut
J. G. Scandalios, North Carolina State University, Raleigh, North Carolina
D. C. Shreffler, University of Michigan, Ann Arbor, Michigan
O. Smithies, University of Wisconsin, Madison, Wisconsin
Z. Šormová, Institute of Organic Chemistry and Biochemistry, Prague, Czechoslovakia
H. E. Sutton, University of Texas, Austin, Texas
E. Vesell, Pennsylvania State University, Hershey, Pennsylvania
G. S. Whitt, University of Illinois, Urbana, Illinois
W. J. Young, University of Vermont, Burlington, Vermont

Published bimonthly at Osney Mead, Oxford, England, by Plenum Publishing Corporation, 227 West 17th Street, New York, N.Y. 10011. In 1978, Volume 16 (12 issues) will be published. Subscription orders should be addressed to the publisher. *Biochemical Genetics* is abstracted or indexed in Biological Abstracts, Chemical Abstracts, Current Contents, Excerpta Medica, Index Medicus, and Psychological Abstracts. © 1978 Plenum Publishing Corporation. *Biochemical Genetics* participates in the program of Copyright Clearance Center, Inc. The appearance of a code line at the bottom of the first page of an article in this journal indicates the copyright owner's consent that copies of the article may be made for personal or internal use. However, this consent is given on the condition that the copier pay the stated per-copy fee through the Copyright Clearance Center, Inc. for all copying not explicitly permitted by Sections 107 or 108 of the U.S. Copyright Law. It does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale, nor to the reprinting of figures, tables, and text excerpts.

Subscription rates:

Volume 16, 1978 (12 issues) \$130.00. Outside the U.S. add \$5.40 for handling and mailing. Prices somewhat higher outside the U.S.

Volume 17, 1979 (12 issues) \$158.00 (outside the U.S., \$180.00).

Second-class postage paid at Jamaica, N.Y. 11431.

Printed in Great Britain.

Biochemical Genetics is published bimonthly at Osney Mead, Oxford, England, by Plenum Publishing Corporation, 227 West 17th Street, New York, N.Y. 10011. In 1978, Volume 16 (12 issues) will be published. Subscription orders should be addressed to the publisher. *Biochemical Genetics* is abstracted or indexed in Biological Abstracts, Chemical Abstracts, Excerpta Medica, Index Medicus, Current Contents, and Psychological Abstracts. © 1978 Plenum Publishing Corporation. *Biochemical Genetics* participates in the program of Copyright Clearance Center, Inc. The appearance of a code line at the bottom of the first page of an article in this journal indicates the copyright owner's consent that copies of the article may be made for personal or internal use. However, this consent is given on the condition that the copier pay the stated per-copy fee through the Copyright Clearance Center, Inc. for all copying not explicitly permitted by Sections 107 or 108 of the U.S. Copyright Law. It does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale, nor to the reprinting of figures, tables, and text excerpts.

CONTENTS

Vol. 16, Nos. 1/2

February 1978

Biochemical Genetics of Altered Acetylcholinesterase Resistance to Insecticides in the House Fly <i>F. W. Plapp, Jr., and R. K. Tripathi</i>	1
Control of Drosopterin Synthesis in <i>Drosophila melanogaster</i> : Mutants Showing an Altered Pattern of GTP Cyclohydro-lase Activity During Development <i>B. A. Evans and A. J. Howells</i>	13
Effects of the <i>Floury-2</i> Locus on Zein Accumulation and RNA Metabolism During Maize Endosperm Development <i>Richard A. Jones</i>	27
Association Between Cholesterol and 2,3-Diphosphoglycerate in Genetically Selected Hooded Rat Lines <i>N. A. Noble, G. J. Brewer, and F. J. Oelshlegel, Jr.</i>	39
DNA Sequence Organization in the Soybean Plant <i>Robert B. Goldberg</i>	45
Nonsecreting Myeloma Variants with Heavy-Chain Carbohydrate Deficiencies <i>Gail L. Waring</i>	69
Genetic Protein Polymorphisms in Human Saliva: An Interpretive Review <i>Edwin A. Azen</i>	79
<i>Drosophila</i> Hemolymph Proteins: Purification, Characterization, and Genetic Mapping of Larval Serum Protein 2 in <i>D. melano-gaster</i> <i>Michael E. Akam, David B. Roberts, and Jonathan Wolfe</i>	101
Instability of the Bovine MOR-2AB (Mitochondrial Malate: NAD Oxidoreductase) Heterodimeric Molecule of Heterozy-gous Subjects After Isoelectric Focusing <i>M. Ansay</i>	121
Biochemical Genetics of a New Glucosephosphate Isomerase Allele (<i>Gpi-1^c</i>) from Wild Mice <i>Rose Ann Padua, Grahame Bulfield, and Josephine Peters</i>	127

- Allelic Expression in Intergeneric Fox Hybrids (*Alopex lagopus* × *Vulpes vulpes*). III. Regulation of the Expression of the Parental Alleles at the *Gpd* Locus Linked to the X Chromosome 145
O. L. Serov, S. M. Zakijan, and V. A. Kulichkov

Vol. 16, Nos. 3/4

April 1978

- Variation in Amount of Enzyme Protein in Natural Populations 159
Nigel Lewis and John Gibson
- Genetic Control and Ontogeny of Microbody Enzymes: A Review 171
Roger S. Holmes and Colin J. Masters
- Expression of Lactate Dehydrogenase Isozyme 5 (LDH-5) in Cultured Mouse Blastocysts in the Absence of Implantation and Outgrowth 191
Horst Spielmann, Hans-Georg Eibs, Ursula Jacob-Müller, and Rosemarie Bischoff
- Alcohol Metabolism in *Drosophila melanogaster*: Uselessness of the Most Active Aldehyde Oxidase Produced by the Aldox Locus 203
Jean David, Charles Bocquet, Jeannine Van Herrewwege, Pierre Fouillet, and Marie-François Arens
- Evidence for the Presence of Two Sympatric Species of Mice (Genus *Mus* L.) in Southern France Based on Biochemical Genetics 213
Janice Britton and Louis Thaler
- Reexpression of HPRT Activity Following Cell Fusion with Polyethylene Glycol 227
Bohdan Bakay, Marsha Graf, Sharen Carey, Erkki Nissinen, and William Nyhan
- An Acid Phosphatase Locus Expressed in Mouse Kidney (*Apk*) and Its Genetic Location on Chromosome 10 239
James E. Womack and Sandra Belsky Auerbach
- A Second Gene Affecting the Sialylation of Lysosomal α -Mannosidase in Mouse Liver 247
Mark Dizik and Rosemary W. Elliott

Autosomal Inheritance of Phosphoglycerate Kinase in the Domestic Chicken (<i>Gallus domesticus</i>) <i>Annette E. Cam and Desmond W. Cooper</i>	261
Genetic and Biochemical Analysis of Cycloheximide Resistance in the Fungus <i>Podospora anserina</i> <i>Marc Crouzet, Michel Perrot, Maria Nogueira, and Joël Bégueret</i>	271
Estimating Total Genic Diversity in the House Mouse <i>Francois Bonhomme and Robert K. Selander</i>	287
A Simple Approach for Discovering Common Nonelectrophoretic Enzyme Variability: A Heat Denaturation Study in <i>Drosophila melanogaster</i> <i>G. Trippa, A. Catamo, A. Lombardozi, and R. Cicchetti</i>	299
Inheritance and Linkage Analysis of Five Enzyme Loci in Interspecific Hybrids of Toadlets, Genus <i>Bombina</i> <i>Jacek M. Szymura and Irena Farana</i>	307
Rudimentary Locus of <i>Drosophila melanogaster</i> : Partial Purification of a Carbamylphosphate Synthase-Aspartate Transcarbamylase-Dihydroorotase Complex <i>Virginia M. Brothers, Stuart I. Tsubota, Susan E. Germeraad, and James W. Fristrom</i>	321
Genetics and Physiological Expression of β -Hydroxy Acid Dehydrogenase in <i>Drosophila</i> <i>Jack E. Tobler and Ellsworth H. Grell</i>	333
Nitrogen Regulation of Amino Acid Catabolism in <i>Neurospora crassa</i> <i>Thomas J. Facklam and George A. Marzluf</i>	343
Messenger RNA for the Insect Storage Protein Calliphorin: <i>In Vitro</i> Translation and Chromosomal Hybridization Analyses of a 20 S Poly(A)-RNA Fraction <i>D. J. Kemp, J. A. Thomson, W. J. Peacock, and T. J. V. Higgins</i>	355

Vol. 16, Nos. 5/6

June 1978

Biochemical Genetics of Macaques. I. 6-Phosphogluconate Dehydrogenase Polymorphisms in <i>Macaca mulatta</i> and <i>Macaca speciosa</i> <i>J. L. VandeBerg and W. H. Stone</i>	373
---	-----

Analysis of Mechanisms Regulating the Expression of Parental Alleles at the <i>GPD</i> Locus in Mule Erythrocytes <i>O. L. Serov, S. M. Zakijan, and V. A. Kulichkov</i>	379
Screening of Inbred Rat Strains for Electrophoretic Protein Polymor- phisms <i>K. Bender and E. Gunther</i>	387
Immunogenetic Study on the Polymorphism of Serum α_2 -Lipopro- teins in Mink. II. Identification of Allotypes <i>Lpm-7</i> and <i>Lpm-8</i> and Genetic Control of Seven Markers of the <i>Lpm</i> System <i>O. K. Baranov, V. I. Yermolaev, and D. K. Belyaev</i>	399
Functional Mutants of Yeast Alcohol Dehydrogenase Affecting Kine- tics, Cellular Redox Balance, and Electrophoretic Mobi- lity <i>Christopher Wills and Julia Phelps</i>	415
Catalytic Properties and Stability of Three Common Variants of Placental Alkaline Phosphatase <i>Per Åke Holmgren and Torgny Stigbrand</i>	433
Genetic Regulation of Liver Alcohol Dehydrogenase in <i>Peromyscus</i> <i>Karen G. Burnett and Michael R. Felder</i>	443
Genetic Control of Enzyme Polymorphisms in the California Vole, <i>Microtus californicus</i> <i>Bonnie S. Bowen and Suh Y. Yang</i>	455
Dietary Rescue of a Lethal "Null" Activity Allele of 6-Phosphoglu- conate Dehydrogenase in <i>Drosophila melanogaster</i> <i>M. Beatrice Hughes and John C. Lucchesi</i>	469
Assignment of the Gene for Dipeptidase-2 to <i>Mus musculus</i> Chromo- some 18 by Somatic Cell Hybridization <i>Leslie A. Leinwand and Frank H. Ruddle</i>	477
Ontogeny of Sorbitol Dehydrogenases in <i>Drosophila melanogaster</i> <i>William L. Bischoff</i>	485
Genetic Control of Alcohol Dehydrogenase Levels in <i>Drosophila</i> <i>Gustavo Marori</i>	509
Partial Covalent Structure of Two Basis Chromosomal Proteins from Human Spermatozoa <i>Wim Gaastra, Janke Lukkes-Hofstra, and Arend H. J. Kolk</i>	525

Survey of Isoenzymes in the Snail <i>Cepaea nemoralis</i> Using Different Buffer/Gel Systems in Polyacrylamide Disc Gel Electrophoresis: Validity of Comparisons and Effect of "Nothing Dehydrogenase" Activity	531
<i>Peter D. Gill</i>	
Alcohol Dehydrogenase Polymorphism in Populations of <i>Drosophila melanogaster</i> . II. Relation Between ADH Activity and Adult Mortality	541
<i>A. Kamping and W. van Delden</i>	
Esterases of <i>Mus musculus</i> : Substrate and Inhibition Characteristics, New Isozymes, and Homologies with Man	553
<i>Josephine Peters and H. R. Nash</i>	
Identification and Linkage Relationships of Three Hexokinase Genes in <i>Aedes aegypti</i>	571
<i>Walter J. Tabachnick</i>	
Genetic Bases for Protein Polymorphism in <i>Fundulus heteroclitus</i> (L.). I. Lactate Dehydrogenase (<i>Ldh-B</i>), Malate Dehydrogenase (<i>Mdh-A</i>), Glucosephosphate Isomerase (<i>Gpi-B</i>), and Phosphoglucumutase (<i>Pgm-A</i>)	577
<i>Allen R. Place and Dennis A. Powers</i>	
Biochemical Genetics of <i>Fundulus heteroclitus</i> (L.). I. Temporal and Spatial Variation in Gene Frequencies of <i>Ldh-B</i> , <i>Mdh-A</i> , <i>Gpi-B</i> , and <i>Pgm-A</i>	593
<i>Dennis A. Powers and Allen R. Place</i>	
Heterosis in a Wild Strain of <i>Drosophila polymorpha</i> with a Lethal Closely Linked to the Major Esterase Locus	609
<i>Marly Napp and Antonio Cordeiro</i>	

Vol. 16, Nos. 7/8

August 1978

Biochemical and Genetic Characterization of Kynurenine Formamidase from <i>Drosophila melanogaster</i>	619
<i>Gordon Paul Moore and David T. Sullivan</i>	
Methemoglobin Reductase in Three Species of Bovidae	635
<i>Ronald D. Fulton, J. Caldwell, and D. F. Weseli</i>	

Origin of the Multiple Components of Human α_1 -Antitrypsin <i>Akira Yoshida and Mia Wessels</i>	641
Heterozygosity in Yellowstone Park Elk, <i>Cervus canadensis</i> <i>D. G. Cameron and E. R. Vyse</i>	651
Assignment of the Gene for Glyoxylase I to Mouse Chromosome 17 by Somatic Cell Genetics <i>Leslie Leinwand, Elizabeth Nichols, and Frank H. Ruddle</i>	659
Simplified Typing of Mouse Hemoglobin (<i>Hbb</i>) Phenotypes Using Cystamine <i>J. Barry Whitney III</i>	667
Fluorescence Spectrophotometric Analysis of Melanins in the House Mouse <i>Takashi Ikejima and Takuji Takeuchi</i>	673
A Technique for Detection and Relative Quantitative Analysis of Glucosephosphate Isomerase Isozymes from Nanogram Tissue Samples <i>Alan C. Peterson, Patricia M. Frair, and Gordon G. Wong</i>	681
† Biochemical Genetics of Macaques. II. Glucosephosphate Isomerase Polymorphism in Rhesus Monkeys <i>J. L. VandeBerg and W. H. Stone</i>	691
Association in Long-Evans Hooded Rats of Red Cell 2,3-Diphos- phoglycerate Levels with Hemoglobin Types <i>G. Brewer, J. Gilman, N. Noble, and V. Crews</i>	695
Genetics of Esterases in <i>Drosophila</i> . VI. Gene System Regulating the Phenotypic Expression of the Organ-Specific Esterase in <i>Drosophila virilis</i> <i>L. I. Korochkin, N. M. Matveeva, B. A. Kuzin, G. I. Karasik, and L. F. Maximovsky</i>	709
An Examination of the Age-Related Patterns of Decay of Acid Phos- phatase (ACP ₁) in Human Red Cells from Individuals of Different Phenotypes <i>Pauline A. Rogers, Rachel A. Fisher, and Wendy Putt</i>	727
† On the Two Electrophoretic Forms of the Human Superoxide Dismu- tase A in the Homozygote SOD A1 <i>N. Crosti</i>	739

† NOTE

Effect of the Mouse Mutants Testicular Feminization and Sex Reversal on Hormone-Mediated Induction and Repression of Enzymes <i>Grahame Bulfield and Andrew Nahum</i>	743
Aconitase (E.C. 4.2.1.3) Mitochondrial Locus Mapped to Human Chromosome 22: Studies with Chinese Hamster-Human Somatic Cell Hybrids <i>Robert S. Sparkes, T. Mohandas, Maryellen C. Sparkes, and Jeffery D. Shulkin</i>	751
Alcohol-Oxidizing Enzymes in 13 <i>Drosophila</i> Species <i>Geoffrey K. Chambers, John F. McDonald, Michael McElfresh, and Francisco J. Ayala</i>	757
Heat Stability Studies at the α -Glycerophosphate Dehydrogenase Locus in Populations of <i>Drosophila melanogaster</i> <i>Glenn C. Bewley</i>	769
Pigment Synthesis in Maize Aleurone from Precursors Fed to Anthocyanin Mutants <i>Sheila McCormick</i>	777
Gene Diversity of Bovid Hemoglobins <i>M. E. John and John Barnabas</i>	787
Subunit Size of Enzymes and Genetic Heterozygosity in Vertebrates <i>Robert D. Ward</i>	799
Genetic and Molecular Analysis of Nonrandom Dimer Assembly of the Creatine Kinase Isozymes of Fishes <i>Stephen D. Ferris and Gregory S. Whitt</i>	811
Genetic Aspects of Wheat Gliadin Proteins <i>Dale K. Mecham, Donald D. Kasarda, and Calvin O. Qualset</i>	831

Vol. 16, Nos. 9/10

October 1978

Mutagenesis at the Cinnabar Locus in <i>Drosophila melanogaster</i> <i>Duncan R. Paton and David T. Sullivan</i>	855
An Anthranilate Synthase of the Extreme Aminase Type in a Species of Blue-Green Bacteria (Algae) <i>Eliot Friedman and Roy A. Jensen</i>	867

Interaction of the <i>Opaque-2</i> Gene with Starch-Forming Mutant Genes of the Synthesis of Zein in Maize Endosperm <i>C. Y. Tsai, B. A. Larkins, and D. V. Glover</i>	883
Segregation of Genetic Determinants for Murine Glucuronidase Synthesis and Loss in CXB Recombinant-Inbred Strains <i>Gordon Watson and Kenneth Paigen</i>	897
Electrophoretic Heterogeneity of 5-Phosphoribosyl-1-pyrophosphate Synthetase Within and Among Humans <i>Roger V. Lebo and David W. Martin, Jr.</i>	905
Role of Adenine Phosphoribosyltransferase in Adenine Uptake in Wild-Type and APRT-Mutants of CHO <i>Frank R. Witney and Milton W. Taylor</i>	917
Genetic and Biochemical Aspects of Trehalase from <i>Drosophila melanogaster</i> <i>Melvin J. Oliver, R. E. Huber, and John H. Williamson</i>	927
† Autogenesis vs. Esterase Polymorphism and Chlorpyrifos (Dursban) Resistance in <i>Culex pipiens pipiens</i> L. <i>Nicole Pasteur and Gilbert Sinègre</i>	941
Species Identification in Protozoa: Glucosephosphate Isomerase Variation in the <i>Paramecium aurelia</i> Group <i>A. Tait</i>	945
Analysis of Plant Genomes. V. Comparative Study of Molecular Properties of DNAs of Seven <i>Allium</i> Species <i>P. K. Ranjekar, D. Pallotta, and J. G. Lafontaine</i>	957
Relationship Between Subunit Size and Number of Rare Electrophoretic Alleles in Human Enzymes <i>Walter F. Eanes and Richard K. Koehn</i>	971
Electrophoretic Study of Genetic Variation in British <i>Myzus persicae</i> (Sulz.) (Hemiptera, Aphididae) <i>David Wool, Steven Bunting, and H. F. van Emden</i>	987
Relationship Between Genetic Variation in Thermal Stability and Electrophoretic Mobility of Mouse β -Galactosidase <i>Franklin G. Berger and Aldons J. Lusis</i>	1007

†NOTE

Glossy Mutants of Maize. VIII. Accumulation of Fatty Aldehydes in Surface Waxes of <i>gl5</i> Maize Seedlings <i>G. Bianchi, P. Avato, and F. Salamini</i>	1015
Demonstration of 6-Phosphogluconolactonase Activity in <i>Drosophila melanogaster</i> Using a Null Allele of 6-Phosphogluconate Dehydrogenase <i>M. Beatrice Hughes and John C. Lucchesi</i>	1023
†Possible Autosomal Inheritance of Erythrocyte Phosphoglycerate Kinase A in Echidnas <i>J. L. VandeBerg and D. W. Cooper</i>	1031
Genetic Control of Nucleoside Transport in Sheep Erythrocytes <i>S. M. Jarvis and J. D. Young</i>	1035

Vol. 16, Nos. 11/12

December 1978

Identification and Properties of UDP-Glucose: Cyanidin-3- <i>O</i> -Glucosyltransferase Isolated from Petals of the Red Campion (<i>Silene dioica</i>) <i>John Kamsteeg, Jan van Brederode, and Gerrit van Nigtevecht</i>	1045
Identification, Properties, and Genetic Control of UDP-Glucose: Cyanidin-3-Rhamnosyl-(1→6)-Glucoside-5- <i>O</i> -Glucosyltransferase Isolated from Petals of the Red Campion (<i>Silene dioica</i>) <i>John Kamsteeg, Jan van Brederode, and Gerrit van Nigtevecht</i>	1059
Acetylation of Sulfamethazine in a Nigerian Population <i>L. C. Eze and O. Obidoa</i>	1073
Glycosaminoglycan Accumulation with Partial Deficiency of β -Glucuronidase in the C3H Strain of Mice <i>Shaul Yatziv, Robert P. Erickson, Robert Sandman, and William van B. Robertson</i>	1079
Biochemical Characterization of a Red Cell UMP Kinase Variant Found in the Warao Indians of Venezuela <i>María L. Gallango, A. Müller, and R. Suinaga</i>	1085

†NOTE

Peromyscus Alcohol Dehydrogenase: Lack of Cross-Reacting Material in Enzyme-Negative Animals	1093
<i>Karen G. Burnett and Michael R. Felder</i>	
Esterase 13, a New Mouse Esterase Locus with Recessive Expression and Its Genetic Location on Chromosome 9	1107
<i>James A. Womack, Benjamin A. Taylor, and Joan E. Barton</i>	
A Genetic and Developmental Analysis of an Acid Deoxyribonuclease in <i>Drosophila melanogaster</i>	1113
<i>Charles Detwiler and Ross MacIntyre</i>	
†Monoamine Oxidase Activity Reduced in Cultured Human Fetal Cells Deficient in Hypoxanthine-Guanine Phosphoribosyltransferase Activity	1135
<i>S. D. Skaper and I. A. Shafter</i>	
†Van der Waals Bonds as Unit Factors in Allozyme Thermostability Variation	1139
<i>Bonnie M. Sampsell and Roger Milkman</i>	
Nucleoside Phosphorylase 2 (<i>Np-2</i>) of Mice	1143
<i>Theodore A. Bremner, E. Premkumar-Reddy, Kunjuraman Nayar, and Richard E. Kouri</i>	
Xanthommatin Biosynthesis in Wild-Type and Mutant Strains of the Australian Sheep Blowfly <i>Lucilia cuprina</i>	1153
<i>K. M. Summers and A. J. Howells</i>	
Variation in the Genetic Structure of <i>Peromyscus</i> Populations. I. Genetic Heterozygosity—Its Relationship to Adaptive Divergence	1165
<i>Eric J. Loudenslager</i>	
Identification of the Mutation Responsible for an Enzyme Polymorphism	1181
<i>John P. Baker</i>	
Molecular and Tissue-Specific Heterogeneity in HPRT Deficiency	1187
<i>M. P. Uitendaal, C. H. M. M. de Bruyn, T. L. Oei, and P. Hösl</i>	
The γ Chain of Fetal Hemoglobin of the Orangutan	1203
<i>W. A. Schroeder, J. Roger Shelton, Joan B. Shelton, and T. H. J. Huisman</i>	

Genetics and Ontogeny of Aldehyde Dehydrogenase Isozymes in the Mouse: Localization of <i>Ahd-1</i> Encoding the Mitochondrial Isozyme on Chromosome 4	1207
<i>Roger S. Holmes</i>	
A Comparative Study of the Age-Related Patterns of Decay of Some Nucleoside Monophosphate Kinases in Human Red Cells	1219
<i>Talat P. Jamil, Dallas M. Swallow, and Sue Povey</i>	
Genetic Variation in the Activity of the Histidine Catabolic Enzymes Between Inbred Strains of Mice: A Structural Locus for a Cytosol Histidine Aminotransferase Isozyme (<i>Hat-1</i>)	1233
<i>Grahame Bulfield</i>	
Author Index to Volume 16	1243
Subject Index to Volume 16	1247

